



LIFE22-ENV-IT-INSPIREE project, Europe's first industrial-scale plant for recycling rare earth elements from WEEE will be built in Ceccano at Itelyum Regeneration

The 42 months **LIFE22-ENV-IT-INSPIREE project** officially started on October 1st 2023. It will lead to the design and commissioning at the Itelyum plant in Ceccano (FR) of Europe's first industrial-scale plant for the recycling of rare-earth elements (neodymium, praseodymium, dysprosium) from exhausted permanent magnets (PM) from WEEE.

The project brings together key players to cover the entire value chain, with Itelyum Regeneration S.p.A. as lead partner and coordinator, and benefits from EU co-funding of EUR 3,245,429.41.

Project participants: Erion Compliance Organisation, Globeco Srl, University of L'Aquila and EIT Materie Prime CLC South S.r.l.

The ambitious Project will lead to the creation of a new circular economy supply chain model, thus contributing to the implementation of the Circular Economy Action Plan for a cleaner and more competitive Europe.

It will also contribute to increasing the EU's strategic autonomy in the field of critical raw materials (CRM) and the amount of CRM recycled from waste, as stipulated in the Critical Raw Materials Act (at least 15% of annual EU consumption).

The aim is also to confirm Italy as the country with the highest levels of recycling - starting with the Italian model of used oil refining which is close to 100% - by defining a standard WEEE management system for collection, disposal in treatment plants and recycling in ETR, to be replicated in other EU countries.

Also from a Country System perspective, the Project intends to support the implementation of the End of Waste Directive.

The objective of the project is to build a plant with a capacity of 2,000 t/y of PM, starting with the treatment of 500 t/y of spent permanent magnets (PM) and then continuing with subsequent developments in a scale-up to achieve the recycling of more than 20,000 t/y of spent PM from different sources including used HDDs (hard disk drives), spent consumer electronics, lithium ion batteries for commercial and automotive use, and LCD panels. It will therefore be a modular and multifunctional plant development pathway that will also enable research and development activities on critical raw materials.

An additional investment of EUR 9.5 million is planned by the end of 2030.